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IAS POLICY ON PROFICIENCY TESTING FOR LABORATORIES

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SCOPE:

This document defines the International Accreditation Service (IAS) policy on the use of Proficiency Testing (PT) for laboratory accreditation. Successful results from PT are an indication of a laboratory's technical competence and are an essential part of IAS accreditation. Proficiency testing is a tool used by laboratories and accreditation bodies for monitoring test and calibration results and for verifying the effectiveness of the accreditation process. This policy incorporates the PT requirements outlined in ILAC-P9: 06/2014, ILAC Policy for Participation in Proficiency Testing Activities.

REFERENCES:

ISO/IEC Standard 17025:2005, *General requirements for the competence of testing and calibration laboratories*

ISO/IEC Standard 17043, *Conformity assessment – General requirements for proficiency testing*

APLAC PT001, *Calibration Interlaboratory Comparisons*

ILAC-P9: 06/2014, *ILAC Policy for Participation in Proficiency Testing Activities*

POLICY:

In accordance with ILAC P9, IAS-accredited laboratories or laboratories seeking accreditation are required to document a formal "PT Participation Plan (Plan)." This Plan is to be formulated by the laboratory and should address the laboratory's minimum level and frequency of participation in PT activities and shall be regularly reviewed in response to changes in staffing, methodologies, instrumentation, etc. The Plan will be reviewed on-site by IAS assessors during assessments.

Laboratories that are accredited or seeking accreditation, to ISO/IEC Standard 17025:2005 are expected to participate in at least one proficiency test (PT) for each field of accreditation where the tests are (1) available, (2) appropriate, and (3) do not cause undue hardship for the laboratory. The laboratory is expected to complete the PT(s) within four years.

In fields that contain multiple significant disciplines, at least one PT is expected for each significant discipline, within four years as outlined above. An example is the field of calibration, which has significant disciplines such as dimensional, mechanical, electrical, and RF/microwave.

There may also be circumstances in which PT participation has been mandated for the purposes of accreditation by regulatory bodies, industry or professional sector requirements or a Regional Cooperation Body.

PT is not a tool for determining calibration and measurement capability (CMC); PT is a tool that is used to monitor laboratory performance with respect to other laboratories, and may be used by the laboratory to identify appropriate improvements to laboratory processes.

ARTIFACTS:

Artifacts or items for testing generally are one of two types. They are either characterized or non-characterized.

Characterized artifacts are typically an easily definable item. An example is a set of gauge blocks. Characterized artifacts are sent to a laboratory that will act as a reference laboratory, such as a National Measurement Institute (NMI). The values provided by the reference laboratory become the reference value(s) for the artifact. Additional laboratories within the PT run tests or calibrations, and their results are calculated relative to the reference value.

Non-characterized artifacts are not easily defined. An example would be concrete. The actual strength value of the artifact will depend on such variables as the water, sand, and exact mix ratios that are used. There is no reference laboratory for non-characterized artifacts, and therefore no specific reference value for the artifact. Results from the test or calibration are calculated relative to the results for other laboratories participating in the PT.

EVIDENCE:

Each laboratory is required to maintain a PT Participation Plan and evidence of its involvement in PT activities. This evidence must include the testing results, including any observations and derived data, and clear identification of the laboratory.

The evidence must be in English, or translatable into English.

PARTICIPATION:

Laboratories will be expected to advise IAS when applying to participate in a PT, when the artifact is received, when the laboratory's results have been submitted to the PT provider, and when the formal report is issued by the PT provider. Additional specific detail includes the field (and discipline as appropriate) and PT provider (e.g., CCRL, NAPT, CTS).

The laboratory is not required to notify IAS regarding participation in a PT if the PT is outside the scope of IAS accreditation of the laboratory. An example is a laboratory accredited by IAS for concrete, and the laboratory participates in a PT on asphalt. The laboratory is not required to notify IAS about the participation in the asphalt PT. IAS is not required to accept the results of PTs that are outside the laboratory's scope of accreditation nor does participation outside the scope of IAS accreditation exempt a laboratory from participation in PT within its IAS scope.

If the laboratory's results are classified as "outliers," the laboratory is expected to:

- Internally document the outlier status using its own internal mechanism, such as an internal audit discrepancy report.
- Investigate to determine the cause and likely effect(s) of the outlier.
- Investigate to determine if the cause of the outlier may have affected any tests or calibrations for customers, the extent of any effect, and whether the effects are acceptable or if a recall is necessary.
- Develop and implement a plan as appropriate for corrective action, to address any noted discrepancies, or for preventive action to improve laboratory processes.
- Specifically document these steps, for each outlier result.
- Review each outlier and the subsequent investigation: the review must be documented in the minutes of the management review meeting.
- The laboratory is strongly encouraged to directly relate any plan for corrective or preventive action to business support processes (e.g., training, purchase of equipment).

Where a PT (1) is not available, (2) is not appropriate, or (3) would place an undue hardship on a laboratory, documentation that "quality control" checks such as those specified in clause 5.9.1 of ISO/IEC 17025:2005 or other alternative methods of test or calibration quality assurance must be used. These methods must be specifically documented, specifically identified as an alternative to PT, and specifically reviewed at management review.

Examples of activities that may be used to monitor the validity of tests and calibrations include, but are not limited to, the following:

a) Regular use of certified reference materials and/or internal quality control using secondary reference materials;

b) Participation in interlaboratory comparison or proficiency-testing programs;

c) Replicate tests or calibrations using the same or different methods;

d) Retesting or recalibration of retained items;

e) Correlation of results for different characteristics of an item.

While the results of these quality control checks do not need to be submitted to IAS, a representative sampling of these internal checks will be reviewed on-site by IAS assessors during assessments.

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